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The imagines of *Mesosmittia* Brundin, 1956, with description of seven new species

(Diptera, Chironomidae)

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A generic diagnosis is given for male and female imagines of *Mesosmittia* Brundin, 1956. The genus apparently is most closely related to *Camptocladius* v. d. Wulp and *Pseudosmittia* Goetghebuer. A key to male imagines is given. One new Neotropical species, *Mesosmittia truncata*, and six new Nearctic species are described as male imagines: *Mesosmittia acutistylus*, *Mesosmittia lobiga*, *Mesosmittia mina*, *Mesosmittia patrihortae*, *Mesosmittia prolixa*, *Mesosmittia tora*. The male and female of *Mesosmittia flexuella* (Edwards) are redescribed.

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Introduction

When visiting different research institutions in U.S.A. I was made aware of a new species of *Mesosmittia* Brundin with apical extension of the gonocoxite. In order to compare the new species with other material I checked through material previously determined by SUBLETTE & SUBLETTE (1979: 77–78) as *Mesosmittia flexuella* (Edw.) and *Mesosmittia* n. sp. and by me as *M. flexuella* (SAETHER 1973: 59), and found that several closely related species were involved. A comparison with material from the British Museum (Natural History) (B. M. N. H.) revealed that *M. flexuella* not was conspecific with any of the Nearctic species. Material in the B. M. N. H. from the Panama Canal zone included a new species of *Mesosmittia*. A description of the seven new species together with redescrptions of male and female imagines of *M. flexuella* and a key to male imagines of the genus follows below.

Material and methods

The general morphological terminology follows SAETHER (1980) with the exception that the apical “spine” of the male gonostylus is termed megaseta. The measurements are given as ranges followed by a mean when three or more specimens are measured; n = number measured. In the figures of the male hypopygium the dorsal aspect is shown to the left, the ventral aspect and the apodemes to the right.

The holotypes are deposited at the Museum of Zoology (ZMBN), Bergen, Norway. Further material has been deposited at British Museum of Natural History (BMNH), London, England; Canadian National Collection (CNC), Ottawa, Ont., Canada; U.S. National Museum (USNM), Washington, D.C., U.S.A.; Zoologische Staatssammlung (ZSM), Munich, West Germany; and collection of James E. Sublette (JES), Portales, New Mexico.

Mesosmittia formally is a synonym of *Pseudorthocladius* Edwards, 1932, and not of *Pseudorthocladius* of authors (equals *Pseudokiefferiella* LAURENCE, 1951 not Zavřel, 1941 unavailable). However, according to current usage and following the proposal by CRANSTON (1975: 90) the name *Mesosmittia* is retained here.

Type species: *Mesosmittia flexuella* (Edwards, 1929: 319) by original designation.

Other included species: *Mesosmittia acutistylus* spec. nov., *Mesosmittia lobiga* spec. nov., *Mesosmittia mina* spec. nov., *Mesosmittia patrihortae* spec. nov., *Mesosmittia prolixa* spec. nov., *Mesosmittia tora* spec. nov., *Mesosmittia truncata* spec. nov.

Diagnostic characters: The strongly sinuate Cu_1 combined with the presence of setae on squama; costa scarcely or not extended except in Neotropical species; presence of a complete row of acrostichals; elongate female antenna with peculiar, long, adpressed sensilla chaetica; characteristic ridge-like elevation of the male tergite IX without an anal point proper; and the characteristic, divided female gonapophysis VIII; easily separate the imagines from all other orthoclads.

The pupa is unknown.

The larva is characterized by the lack of procercus, anal setae, and mandibular setae subdentalis and interna combined with the presence of simple labral S setae and short posterior parapods with weak claws.

Imago

Coloration brown to blackish brown with more or less distinctly paler median portion of middle and hind tibiae and paler tarsi. Eyes bare, not extended dorsomedially. Male antenna with 13 flagellomeres; antennal groove beginning at flagellomere 3; flagellomeres 2, 3 and 13 with sensilla chaetica, those of 2 and 3 very broad, characteristic (Fig. 1A); AR between 0.8 and 1.8. Female antenna exceptionally long, with 5 flagellomeres; flagellomeres 1–4 with 1 pair, flagellomere 5 with 3 pairs of long, adpressed sensilla chaetica with wavy margins (Fig. 2A). Temporals divided into very weak inner verticals and strong outer verticals. Palp 5-segmented, third and fourth segment subequal, fifth slightly longer than fourth; third segment with 1–3 slender sensilla clavata at apex. Antepnotum well developed; lobes narrowed medially, in narrow contact anterior of scutal projection, with or without weak lateral setae. Dorsocentrals uniserial, acrostichals in complete row beginning near scutal projection, 3–8 prealars, supraalar always present. Scutellars few, uniserial. Wing membrane without setae, punctation of microtrichia visible at $300\times$. Anal lobe well developed, more or less projecting. Costa not or barely extended or, in the Neotropical species, strongly extended, extension longer in female; R_{2+3} ends in the middle between ends of R_1 and R_{4+5} ; R_{4+5} ends above or slightly distal to end of M_{3+4} ; vannal fold ends distal, An proximal, to FCu; Cu_1 sinuate; FCu lies widely distal to RM. Sensilla campaniformia about 10 at base of brachiolium, 3 below setae, and about 10 at apex of brachiolium; 1 at base of subcosta; 1 on FR, and 1 at base of R_1 . Brachiolium with 1–2 setae; R with or without setae in male; R, R_1 and R_{4+5} with setae in female. Squama with 1–10 setae. Pulvilli vestigial. Comb and hind tibial spurs normal. Pseudospurs and sensilla chaetica of tarsi absent. Setae of abdomen scattered, but apparently always with basal setae. Male without anal point proper, tergum IX with ridgelike elevation carrying several weak lateral setae. Phallapodeme well developed, with triangular aedeagal lobe. Transverse sternapodeme slightly curved to nearly straight with distinct oral projections. Virga present, with broad rounded base and strongly to very weakly sclerotized caudal point. Male gonocoxite with very weak to well developed inferior volsella carrying sclerotized medial rounded or pointed medial projection; often with apical or preapical, rounded or pointed, caudally or medially directed extension with or without setae. Gonostylus with distinct elongate, but low crista dorsalis and very short, pale megaseta. Tergite IX of female divided, with several setae. Gonocoxite IX well developed with sclerotized margin against tergite IX, with several strong and a few weak setae. Gonapophysis VIII divided, with pointed dorso-mesal lobe, large ventrolateral lobe with anterior lobe covering dorsomesal lobe, and distinct apodeme

lobe. Sternite VIII with a concave floor with microtrichia covering anterior part of vagina. Postgenital plate large, triangular with rounded apex. Cercus relatively long and broad. Seminal capsule apparently pear-shaped, with distinct neck. Spermathecal ducts with loops, openings apparently separate.

Pupa – Unknown.

Larvae – See STRENZKE (1950b: 105) and CRANSTON, OLIVER and SAETHER (1983: 180).

Systematics

BRUNDIN (1956: 164) places *Mesosmittia* as a clear member of the *Pseudosmittia* group. SAETHER (1977 fig. 36) placed the genus in the same group as *Camptocladius* v. d. Wulp, *Prosmittia* Brund. and *Pseudosmittia* Goetgh. This position is confirmed both by similarities in the male imago (antenna, wing and hypopygium) as well as in apparent synapomorphies in the larvae. *Mesosmittia*, *Pseudosmittia* and *Camptocladius*, for instance, all lack a seta interna, and *Mesosmittia* and *Pseudosmittia* both lack a seta subdentalis which is reduced in *Camptocladius*.

Two subantarctic genera described by SUBLETTE & WIRTH (1980), *Nakataia* and *Hevelius*, and two genera described by SAETHER (1982) from the southeastern States, *Unniella* and *Platysmittia*, also have a fringed squama separating them from other genera in the *Smittia* – *Parakiefferiella* – *Pseudosmittia* group. *Hevelius* and *Platysmittia* both have a strong virga not unlike that of *Mesosmittia*. The hypopygium of *Hevelius* shows some resemblance to *Mesosmittia*; both *Platysmittia* and *Mesosmittia* (but also *Camptocladius* and *Pseudosmittia*) have distinctly reduced inner verticals. *Hevelius* and some *Platysmittia* (SAETHER 1982: 503, 1985: 527), however, lack acrostichals. *Platysmittia* appears most closely related to *Acamptocladius* Brund. (see SAETHER 1985: 527). Most likely the similarities in wing venation and presence of setae on squama are symplesiomorphies compared with other members of the *Pseudosmittia* group.

Camptocladius has similar wide sensilla chaetica on the male flagellum and also the female have very broad sensilla chaetica. However, *Smittia* and *Pseudosmittia* also have characteristically widened antennal sensilla chaetica and this characteristic must be connected with adaptation to a terrestrial way of life. A female flagellum like that of *Mesosmittia* has not been observed in any other orthoclad. The female genitalia of *Mesosmittia* are unique. The ventrolateral lobe is somewhat similar to that of *Chaetocladius* (SAETHER 1977 fig. 54 C), but other details are not very similar. There is a somewhat sclerotized margin of the gonocoxite against tergite IX as in *Pseudosmittia*, but otherwise the similarities with this genus appear slight, and the genitalia of *Camptocladius* appear to be closer. However, the gonapophyses VIII differ. The exact position of *Mesosmittia* cannot be properly estimated until all the immatures of all the other genera of the group are known and *Pseudosmittia* revised. Based on the present knowledge, however, the genus appears to be intermediate between *Camptocladius* and *Pseudosmittia* perhaps with *Camptocladius* as the closest related genus.

The genus is, based upon the known male imagines, quite homogeneous. *Mesosmittia prolixa* spec. nov. and *Mesosmittia mina* spec. nov. form sister species characterized by a reduced inferior volsella and distinct apical projection of the gonocoxite. *Mesosmittia tora* spec. nov., *Mesosmittia patrihortae* spec. nov. and *Mesosmittia truncata* spec. nov. may form another group, characterized by a similar inferior volsella with a rounded, knob-like projection. *M. tora* also has a variable projection of the gonocoxite and *M. patrihortae* and *M. truncata* have more or less reduced inferior volsellae. Even if the three species are very similar either *M. tora* or the two lastmentioned species could form the sister group of the two firstmentioned species combined. Most likely, however, they form a group and the apical projection of the gonocoxite is secondarily reduced in *M. patrihortae* and *M. truncata*. *M. acutistylus* spec. nov. probably is the sister species of *M. lobiga* plus *M. flexuella* with these combined forming the sister group of the other species.

1. Inferior volsella very low with only knob-like projection distinct; gonocoxite either with apical, posteriorly directed, rounded projection carrying several setae or with preapical, posteriomediaally directed, pointed projection without setae 2
 - Inferior volsella well-developed (see, however, *M. patrihortae*); gonocoxite without or with rounded preapical, posteriomediaally directed projection with setae 3
2. Gonocoxite with apical, posteriorly directed, rounded projection carrying several setae (Fig. 5 D–E): *Mesosmittia prolixa* spec. nov.
 - Gonocoxite with preapical, posteriomediaally directed sharply pointed projection without setae (Fig. 4 B) *Mesosmittia mina* spec. nov.
3. Gonostylus strongly tapering, inferior volsella strongly sclerotized (Fig. 3 B)
 - Gonostylus at most slightly tapering, inferior volsella not strongly sclerotized 4
4. Squama with 9–10 setae, AR 1.7–1.8, virga weak (Fig. 1 E) *Mesosmittia flexuella* (Edw.)
 - Squama with 1–6 setae, AR 0.8–1.5 (unknown in *M. lobiga*), virga stronger 5
5. Inferior volsella clearly widest at rounded knob-like projection (Figs. 4 D–E, 5 D–E, 6 D) 6
 - Inferior volsella at least equally wide posterior of more pointed projection (Fig. 3 D) *Mesosmittia lobiga* spec. nov.
6. Gonocoxite with preapical, posteriomediaally directed, more or less distinct rounded projection with a few setae (Figs. 5 D–E) *Mesosmittia tora* spec. nov.
 - Gonocoxite without projection (Figs. 4 D–E, 6 D) 7
7. AR 1.2–1.5, VR 1.2–1.3, costal extension 8–34 µm long *Mesosmittia patrihortae* spec. nov.
 - AR about 0.8, VR higher than 1.4, costal extension about 116 µm long *Mesosmittia truncata* spec. nov.

***Mesosmittia flexuella* (Edw.)**
(Fig. 1, 2)

Spaniotoma (*Orthocladius*) *flexuella* Edwards, 1929: 349
Orthocladius (*Pseudorthocladius*) *flexuellus* (Edw.), GOETGHEBUER 1932: 93; EDWARDS 1932a: 141, 1932b: 167
Limnophyes macrocerus Goetghebuer, 1937: 278
Limnophyes flexuella (Edw.), GOETGHEBUER 1940–50: 134
 “*Limnophes*” *flexuellus* (Edw.), STRENZKE 1950a: 327, 1950b, female and larva not male
Hydrobaenus (*Pseudorthocladius*) *flexuellus* (Edw.), LAURENCE 1951: 165
Mesosmittia flexuella (Edw.), BRUNDIN 1956: 164; CRANSTON 1975: 90, PINDER 1978: 89
 nec *Mesosmittia flexuella*, SAETHER 1973: 59 (= *Mesosmittia tora* spec. nov.)
 nec *Mesosmittia flexuella*, SUBLETTE & SUBLETTE 1979: 77 (= *Mesosmittia lobiga* spec. nov.)

Material examined: Lectotype, male, Slapton, S. Devon, England, 7/9/1888, leg. G. Verall (Verall Bequest 1911–411, *Orthocladius minutus* Zett ??), det. F. W. Edwards 1930, by present designation. Paralectotypes, 1 male, Snailbeach, Salop, England, 22–28/7/1920, leg. F. W. Edwards 1920–277; 2 males, Whernside, Yorks. England, 19/6/24, leg. F. W. Edwards (one with hypopygium lost from a plastic strip adhered to the pin do not belong to *Mesosmittia*, but to *Psectrocladius*). 1 male, 1 female, Pen-y-Gent. N. W. Yorks, England, 28/6–4/7–1930, leg. F. W. Edwards, BM 1930–307; 2 males, Cefn-y-Gulch, Gwynedd, Wales, 9/10–1975, leg. P. S. Cranston (23/914 244 and 23/806 164), B. M. 1975–497 (all BMNH).

Diagnostic characters: See key on p. 40.

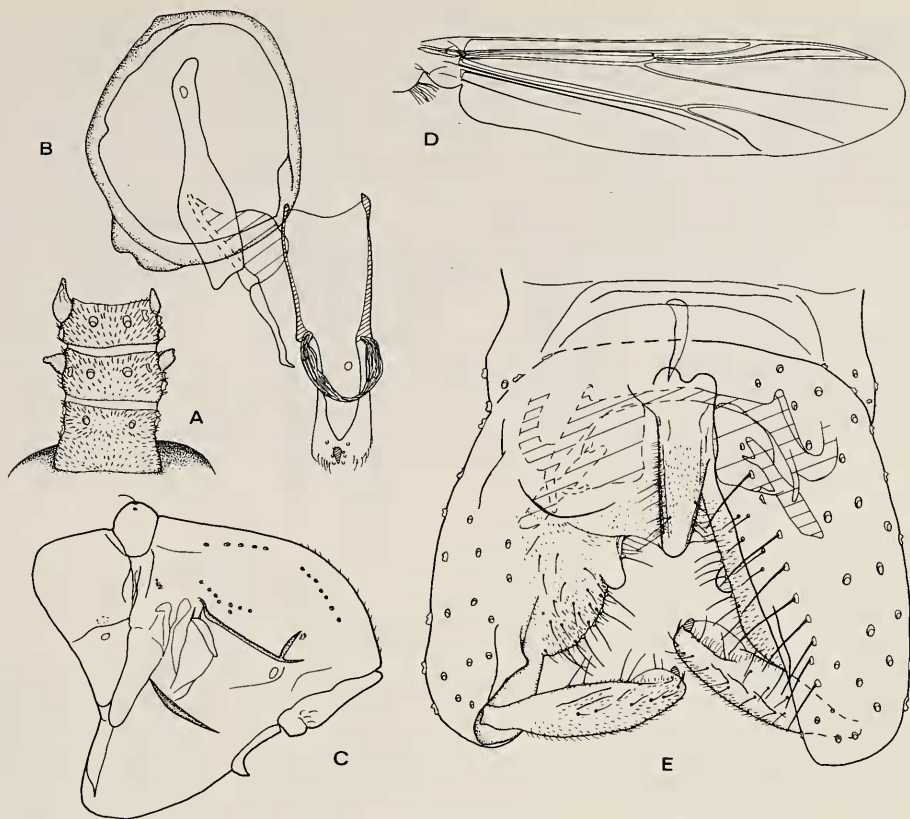


Fig. 1. *Mesosmittia flexuella* (Edw.), male imago: A. Basal antennal segments; B. Cibarial pump, tentorium and stipes; C. Thorax; D. Wing; E. Hypopygium.

Description

Male imago (n = 5–6, except when otherwise stated)

Total length 2.84–3.07, 2.94 mm (3). Wing length 1.58–1.76, 1.65 mm. Total length/wing length 1.63–1.78 (2). Wing length/length of profemur 2.57–2.61 (2). Coloration blackish brown with very indistinct tibial rings and very slightly paler tarsi.

Head. Flagellomeres 2–3 as in Fig. 1A. AR 1.62–1.80, 1.70. Ultimate flagellomere 520–595, 551 μ m long. Temporal setae 6–10, 9; including 1–4, 3 inner verticals and 4–7, 6 outer verticals. Cibarial pump, tentorium and stipes as in Fig. 1B. Tentorium 143–169, 157 μ m long; 30–38, 34 μ m wide at sieve pore. Stipes 128–158, 141 μ m long; 45–56, 51 μ m wide. Palp lengths (micrometers): 34–38, 36; 41–68, 60; 98–120, 108; 98–116, 106; 122–137, 131.

Thorax (Fig. 1C). Anteprenotum with 1–6, 3 lateral setae. Dorsocentrals 9–12, 10; acrostichals 14–17, 15; prealars 5–9, 8. Scutellum with 8 setae.

Wing (Fig. 1D). VR 1.25–1.36, 1.36, 1.31. Cextension 0–30, 17 μ m (4) long. Brachiolum with 1–2, 2 setae, R with 0–3, 1 setae. Squama with 7–10, 9 setae.

Legs. Spur of front tibia 53–64, 57 μ m long; spurs of middle tibia 23–34, 29 μ m and 23–32, 26 μ m (4) long; of hind tibia 49–56, 53 μ m and 15–21, 19 μ m long. Width at apex of front tibia 38–45, 42 μ m; of middle tibia 39–49, 41 μ m; of hind tibia 49–60, 55 μ m. Comb with 12–13, 12 setae; shortest seta 23–26, 24 μ m long; longest seta 42–45, 43 μ m long. Lengths (micrometers) and proportions of legs:

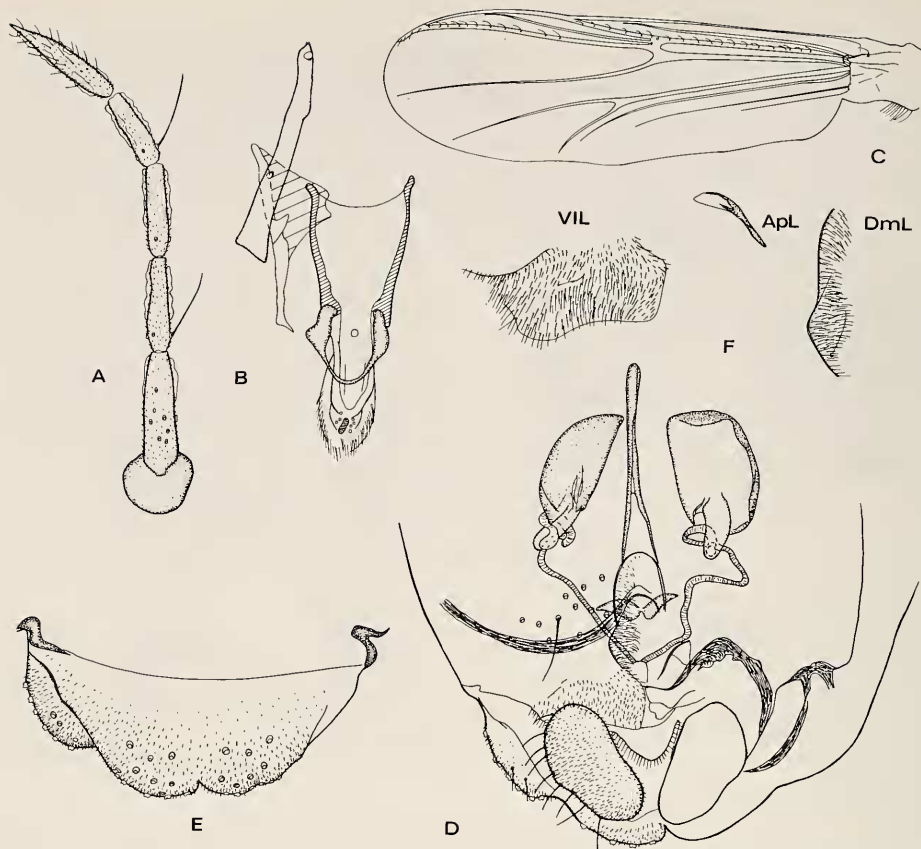


Fig. 2. *Mesosmittia flexuella* (Edw.), female imago: A. Antenna; B. Cibarial pump, tentorium and stipes; C. Wing; D. Genitalia in dorsal aspect; E. Genitalia in ventral aspect; F. Lobes of gonapophysis VIII (VIL, ventrolateral lobe; ApL, apodeme lobe; DmL, dorsomesal lobe).

	fe	ti	ta ₁	ta ₂	ta ₃	ta ₄	ta ₅
p ₁	605-680,643	775-851,803	397-435,408	246-265,253	151-180,171	109-113,112	66-85,77
p ₂	647-728,689	695-737,714	284-293,286	151-180,164	113-132,123	80- 85, 84	71-76,74
p ₃	671-784,730	794-869,826	435-482,464(4)	227-246,235(4)	180-203,193(4)	98-113,105(4)	76-85,82(3)

	LR	BV	SV	BR
p ₁	0.50-0.51,0.51	2.87-3.30,3.02	3.48-3.62,3.54	2.4-2.7,2.6(4)
p ₂	0.39-0.41,0.40	3.66-4.01,3.81	4.73-5.00,4.90	2.5-3.3,2.9
p ₃	0.55-0.58,0.56(4)	3.26-3.32,3.28(3)	3.29-3.41,3.36(4)	3.6-3.8,3.7(3)

Hypopygium (Fig. 1E). Tergum IX with 15-16, 16 setae, laterosternite IX with 6-7, 7 setae. Phallapodeme 84-94, 91 μ m long; transverse sternapodeme 83-101, 91 μ m long. Virga weakly sclerotized; 23-60, 39 μ m long. Gonocoxite 218-229, 219 μ m long with well developed inferior volsella; distance along inner margin from apex of gonocoxite to apex of inferior volsella 45-49, 48 μ m; width of inferior volsella including knob-like projection 21-26, 25 μ m; width excluding projection 19-23, 22 μ m. Gonostylus 101-116, 110 μ m long; with slightly and evenly rounded outer margin and nearly straight inner margin; crista dorsalis well developed, but low; megaseta 8 μ m long. HR 1.93-2.04, 1.98; HV 2.52-2.65, 2.58. (3).

Female imago (n = 1)

Total length 2.44 mm. Wing length 1.31 mm. Total length/wing length 1.86. Wing length/length of profemur 2.62. Coloration as in male except wings rather smoky.

Head. Antenna (Fig. 2A) with AR 0.33. Length of flagellomeres in micrometers: 135, 101, 105, 86, 143. Temporal setae 5, including 1 inner vertical and 4 outer verticals. Clypeus with 4 setae. Cibarial pump, tentorium and stipes as in Fig. 2B. Tentorium 169 µm long, 30 µm wide at sieve pore. Stipes 154 µm long, 56 µm wide. Palp lengths (micrometers): 34, 49, 83, 86, 116. Third palpal segment with 3 apicomedian sensilla clavata. Coronal suture reduced, present only ventrally, 41 µm long.

Thorax. Antepnotum with 3 lateral setae. Dorsocentrals 11, acrostichals 17, prealars 5. Scutellum with 8 setae.

Wing (Fig. 2C). VR 1.23. C extension 64 µm long. Brachiolum with 1 seta, R with 10 setae, R₁ with 5, R₄₊₅ with 1, costal extension with 2 nonmarginal setae. Squama with 9 setae.

Legs. Spur of front tibia 32 µm long, spurs of middle tibia 30 µm and 28 µm long, of hind tibia 45 µm and 15 µm long. Width at apex of front tibia 41 µm, of middle tibia 38 µm, of hind tibia 45 µm. Comb with 11 setae, 23–34 µm long. Lengths (micrometers) and proportions of legs:

	fe	ti	ta ₁	ta ₂	ta ₃	ta ₄	ta ₅	LR	BV	SV
p ₁	501	610	302	180	132	85	66	0.50	3.05	3.67
p ₂	539	576	227	127	95	57	47	0.39	4.18	4.92
p ₃	567	643	331	170	151	80	57	0.51	3.36	3.66

Abdomen. Number of setae on tergites I–VIII as: 21, 27, 40, 41, 48, 46, 39, 20. Number of setae on sternites I–VIII as: 0, 2, 6, 9, 14, 16, 14, 22.

Genitalia (Fig. 2E–F). Gonocoxite with 10 strong and 5 very weak setae. Tergite IX with 24 setae. Cercus 90 µm long. Seminal capsule 90 µm long with an about 60 µm long distinct neck, width not measurable. Notum 94 µm long.

Remarks

M. flexuella is much larger than any Nearctic species. It has a higher number of setae on the squama, and higher antennal ratio. Many of the differences are size dependent and the species is very close to *M. lobiga* spec. nov. from New Mexico. All the Palaearctic specimens described probably are true *M. flexuella* since the descriptions mentioned squama as fully fringed, with several setae or similar. The female specimen described here is considerably smaller than the males even from in the same collection (EDWARDS 1932b: 167). The length of the thorax, tentorium, stipes and basal palp segments indicate that the shorter legs and wings are sexually dimorphic.

Mesosmittia acutistylus spec. nov.
(Figs. 3 A–B)

Mesosmittia new species 1, SUBLETTE & SUBLETTE 1979: 78

Type locality: U.S.A., New Mexico, Canadian River south of Logan.
Type material: Holotype, male, sweepnet, Canadian River 1 mile south of Logan on highway 54, New Mexico, 5/8/76, leg. J. E. Sublette, in coll. Mus. Zool. Univ. of Bergen (ZMBN No. 86).
Diagnostic characters: See key on p. 40.
Etymology: From Latin *acutus*, sharp, pointed; and Greek *stylos*, referring to the tapering male gonostylus.

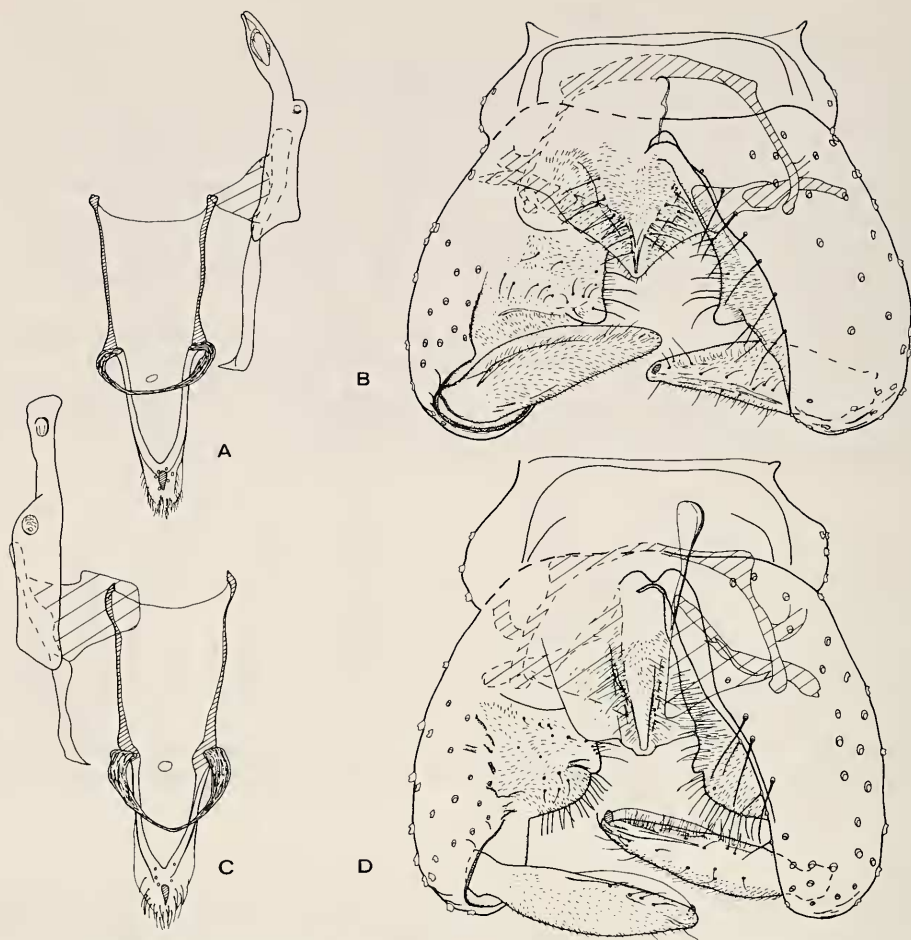


Fig. 3. *Mesosmittia* spp., male imagines: A.–B. *Mesosmittia acutistylus* spec. nov. (A. Cibarial pump, tentorium and stipes; B. Hypopygium). C.–D. *Mesosmittia lobiga* spec. nov. (C. Cibarial pump, tentorium, and stipes; D. Hypopygium).

Description

Male imago (n = 1)

Total length 2.16 mm. Wing length 1.13 mm. Total length/wing length 1.91. Wing length/length of profemur 2.86. Coloration brown with indication of paler tarsi and middle portions of tibia of middle and hind legs.

Head. AR 1.34. Ultimate flagellomere 386 μ m long. Temporal setae 9 including 4 inner verticals and 5 outer verticals. Clypeus with 10 setae. Cibarial pump, tentorium and stipes as in Fig. 3 A. Tentorium 120 μ m long, 19 μ m wide at sieve pore. Stipes 120 μ m long, 41 μ m wide. Palp lengths (micrometers): 26, 51, 79, 71, 86.

Thorax. Antepnotum with 4 lateral setae. Dorsocentrals 10, acrostichals 11, prealars 7. Scutellum with 8 setae.

Wing. VR 1.27. C extension 49 μ m long. Wing incomplete with setae on veins not countable. Squama with 3 setae.

Legs. Spur of front tibia 38 μm long, spurs of middle tibia 15 μm and 11 μm long, of hind tibia 41 μm and 15 μm long. Width at apex of front tibia 32 μm , of middle tibia 34 μm , of hind tibia 41 μm . Comb with 10 setae, 15–32 μm long. Lengths (micrometers) and proportions of legs:

	fe	ti	ta ₁	ta ₂	ta ₃	ta ₄	ta ₅	LR	BV	SV	BR
p ₁	397	510	217	118	90	61	47	0.43	3.56	4.18	2.4
p ₂	473	482	198	95	66	47	47	0.41	4.52	4.82	3.1
p ₃	491	567	293	142	123	66	57	0.52	3.48	3.61	3.4

Hypopygium (Fig. 3 B). Tergum IX with 15 weak setae, laterosternite IX with 6 setae. Phallapodeme 86 μm long, transverse sternapodeme 75 μm long. Virga not very distinct, 30 μm long. Gonocoxite 173 μm long, with well sclerotized inferior volsella with strong projection. Gonostylus 113 μm long, tapering; with very long, but low crista dorsalis and weak, 5 μm long, megaseta. HR 1.53, HV 1.92.

Mesosmittia lobiga spec. nov.
(Figs. 3 C–D.)

Mesosmittia flexuella, SUBLETTE & SUBLETTE 1979: 77, not EDWARDS, 1929

Type locality: U.S.A., New Mexico, Navajo River.
Type material: Holotype, male, sweepnet; Navajo River (Station E) near Colorado – New Mexico state line at Edith, Colorado; New Mexico 17/7/76, leg J. E. Sublette, in coll. Mus. Zool. Univ. of Bergen (ZMBN No. 87). – Paratypes; 1 male as holotype; 1 male, sweepnet, Pecos River 5 Mi. east of Artesia, Eddy Co., New Mexico, 11/10/74, J. E. Sublette (JES).

Diagnostic characters: See key on p. 40.

Etymology: From Latin *lobus*, lobe, and the dismembered *magnus* (large) leaving *-gus* used as suffix, referring to the large inferior volsella.

Description

Male imago (n = 3, except when otherwise stated)

Total length 2.37–2.63, 2.48 mm. Wing length 1.20–1.43, 1.33. Total length/wing length 1.80–1.98, 1.87. Wing length/length of profemur 2.54–2.77, 2.67. Coloration dark brown, tarsi and middle portion of tibiae slightly more pale.

Head. Antenna lost. Temporal setae 7–8, 8; including 3–4, 4 inner verticals and 4 outer verticals. Clypeus with 5–7, 6 setae. Cibarial pump, tentorium and stipes as in Fig. 3 C. Tentorium 124–135, 130 μm long; 21–30, 26 μm wide at sieve pore. Stipes 116–146, 131 μm long; 45–60, 55 μm wide. Palp lengths (micrometers): 30–38, 33; 49–53, 52; 83–98, 90; 79–86 (2); 109–124, 119.

Thorax. Anteprepronotum with 0–1, 0 lateral seta. Dorsocentrals 5–9, 7; acrostichals 14–17, 15; prealars 5–6, 5. Scutellum with 7–9, 8 setae.

Wing. VR 1.23–1.32, 1.27. C extension 0–34, 14 μm long. Brachiolum with 1 seta; R with 2–6, 5 setae. Squama with 3–6, 4 setae.

Legs. Spur of front tibia 49–53, 51 μm long; spurs of middle tibia 23–26, 25 μm and 19–23, 20 μm long; of hind tibia 49 μm and 19 μm long. Width at apex of front tibia 34–38, 36 μm ; of middle tibia 32–38, 35 μm ; of hind tibia 41–47, 44 μm . Comb with 10–13, 12 setae; shortest seta 19–23, 20 μm long; longest seta 38–41, 39 μm long. Lengths (micrometers) and proportions of legs:

	fe	ti	ta ₁	ta ₂	ta ₃	ta ₄	ta ₅
p ₁	473–529,428	624–680,641	269–312,288	170–189 (2)	123–128 (2)	85–90 (2)	66 (2)
p ₂	506–567,531	558–595,576	208–227 (2)	128 (2)	95– 99 (2)	66–76 (2)	57 (2)
p ₃	558–614,580	624–699,658	331–369,344	170–194,181	142–170,156	85–95 (2)	66–71 (2)

	LR	BV	SV	BR
p ₁	0.44–0.46, 0.45	3.11–3.22 (2)	3.87–4.12, 3.96	1.5–2.2, 1.9
p ₂	0.37–0.38 (2)	3.68–3.87 (2)	5.11–5.13 (2)	2.2–2.5, 2.4
p ₃	0.51–0.53, 0.52	3.18 (2)	3.56–3.69, 3.61	3.3–3.4, 3.4

Hypopygium (Fig. 3D). Tergum IX with 15–24, 18 weak setae; laterosternite IX with 6–8, 7 setae. Phallapodeme 83–90, 85 μ m long; transverse sternapodeme 79–94, 89 μ m long. Virga 41–75, 61 μ m long. Gonocoxite 173–198, 186 μ m long; with well developed inferior volsella; distance along inner margin from apex of gonocoxite to apex of inferior volsella 43–56, 51 μ m; maximum width of volsella 26–30, 27 μ m; width at knob-like projection 23–26, 25 μ m. Gonostylus 94–116, 109 μ m long; crista dorsalis well developed low and elongate; megasetae 4.5–8, 7 μ m long. HR 1.65–1.84, 1.72; HV 2.11–2.52, 2.30.

Mesosmittia mina spec. nov.

(Figs. 4A–B)

Type locality: U.S.A., Georgia, Clarke Co., Athens, Oconee River.

Type material: Holotype, male, Oconee River, Athens, Clarke Co., Georgia, leg. P. L. Hudson, 24/8/78, in coll. Mus. Zool. Univ. of Bergen (ZMBN No. 88).

Diagnostic characters: See key on p. 40.

Etymology: From Latin *mina*, projecting point, referring to the sharply pointed preapical projecting of the male gonocoxite.

Description

Male imago (n = 1)

Total length 2.02 mm. Wing length 1.02 mm. Total length/wing length 1.99. Wing length/length of profemur 2.69. Coloration brown with whitish gonostylus and apex of gonocoxite with projection. Legs with apex and base of middle and hind femora slightly paler, tibiae of middle and hind leg whitish except on basal $\frac{1}{5}$ and apical $\frac{1}{6}$, tarsi of all legs whitish.

Head. AR 1.23. Ultimate flagellomere 356 μ m long. Temporal setae 9, including 5 inner verticals and 4 outer verticals. Clypeus with 11 setae. Cibarial pump, tentorium and stipes as in Fig. 4A. Tentorium 120 μ m long, 19 μ m wide at sieve pore. Stipes 116 μ m long, 49 μ m wide. Palp lengths (micrometers): 26, 45, 66, 71, 99.

Thorax. Antepnotum with lateral setae obscured on examined specimen. Dorsocentrals 6, acrostichals 12, prealars 6. Scutellum with 6 setae.

Wing. VR 1.31. C extension 15 μ m long. Brachiolum with 1 seta, R with 1 seta. Squama with 4 setae.

Legs. Spur of front tibia 39 μ m long, spurs of middle tibia 23 μ m and 17 μ m long, of hind tibia 41 μ m and 17 μ m long. Width at apex of front tibia 26 μ m, of middle tibia 23 μ m, of hind tibia 36 μ m. Comb with 11 setae, 19–38 μ m long. Lengths (micrometers) and proportions of legs:

	fe	ti	ta ₁	ta ₂	ta ₃	ta ₄	ta ₅	LR	BV	SV	BR
p ₁	328	491	—	—	—	—	—	—	—	—	—
p ₂	397	421	189	90	71	47	47	0.45	3.95	4.33	5.0
p ₃	425	491	274	142	123	57	43	0.56	3.27	3.34	4.2

Hypopygium (Fig. 4B). Tergum IX with 14 weak setae, laterosternite IX with 6 setae. Phallapodeme 64 μ m long, transverse sternapodeme 90 μ m long. Virga 41 μ m long. Gonocoxite 173 μ m long; with preapical posteriomedialedly directed, sharply pointed, triangular projection without setae; projection 53 μ m wide at base, posterior margin 30 μ m long, anterior margin 53 μ m long. Gonostylus 83 μ m long, about equally broad from base to apex, curved about $\frac{1}{3}$ from base; crista dorsalis low and moderately long; megaseta 8 μ m long. HR 2.09, HV 2.43.

Mesosmittia patrihortae spec. nov.
(Figs. 4C–E)

Type locality: U.S.A., South Carolina, Pickens Co., Clemson, Hudson's garden.

Type material: Holotype, wet area in Hudson's garden, Clemson, Pickens Co., South Carolina, 20/4/80, leg. P. L. Hudson, in coll. Mus. Zool. Univ. of Bergen (ZMBN No. 89). – Paratypes: 1 male as holotype; 2 males, Savannah River at Hwy 184 bridge, Andersen Co., South Carolina, 5/10/79, P. L. Hudson; 1 male, Savannah River at Hwy 181 bridge, 12/7/79, P. L. Hudson; 1 male, Upper Three Runs Creek, Savannah River Plant, Aiken Co., South Carolina, 29/3/77, P. L. Hudson, 1 male light trap, 23–24/7/79, otherwise as preceeding; 1 male, Tinker Creek, 29/3/77, otherwise as preceeding; 1 male, sweep netting, Pacolet River, Spartanburg Co., S. C., 21/8/82, P. L. Hudson; 1 male, Oconee River, Clarke Co., Athens, Georgia, 24/8/78, P. L. Hudson; 1 male Green River, Mammoth Cave National Park, Edmonson Co., Kentucky, 13/8/81, P. L. Hudson (BMNH, CNC, USNM, ZSM, JES).

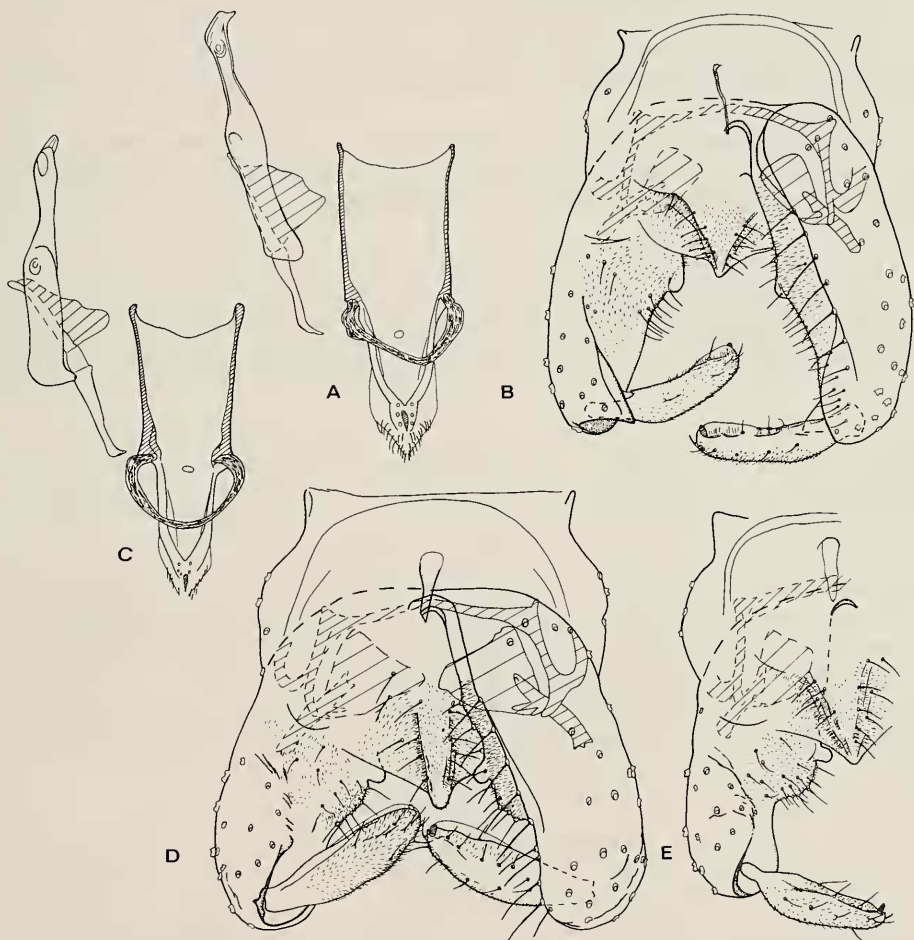


Fig. 4. *Mesosmittia* spp., male imagines : A–B. *Mesosmittia mina* spec. nov. (A. Cibarial pump, tentorium and stipes; B. Hypopygium). C–E *Mesosmittia patrihortae* spec. nov. (C. Cibarial pump, tentorium and stipes; D–E. Hypopygium with variation).

Diagnostic characters: See key on p. 40.

Etymology: From genitive of Patrick (P. L. Hudson) and Latin *horta* garden, and *-ae*, a suffix signifying possession, belonging to; meaning "belonging to Pat's garden".

Description

Male imago (n = 10, except when otherwise stated)

Total length 1.84–2.18, 2.03 mm. Wing length 1.00–1.20, 1.10 mm. Total length/wing length 1.77–1.92, 1.84. Wing length/length of profemur 2.58–2.80, 2.67. Coloration brown, tarsi and middle portion of middle and hind tibia slightly more pale.

Head. AR 1.24–1.49, 1.35. Ultimate flagellomere 375–435, 418 μ m long. Temporal setae 4–8, 6; including 1–4, 3 inner verticals; and 3–4, 3 outer verticals. Clypeus with 4–12, 7 setae. Cibarial pump, tentorium and stipes as in Fig. 4C. Tentorium 105–128, 115 μ m (9) long; 15–26, 21 μ m (9) wide at sieve pore. Stipes 94–120, 105 μ m (9) long; 30–49, 39 μ m (9) wide. Palp lengths (micrometers): 21–30, 26; 38–45, 41; 53–75, 62; 49–73, 59; 60–101, 78.

Thorax. Antep pronotum with 0–3, 1 lateral setae. Dorsocentrals 4–10, 7; acrostichals 5–13, 10 (9); prealars 3–6, 4 (9). Scutellum with 2–8, 6 setae.

Wing. VR 1.21–1.30, 1.24. C extension 8–34, 21 μ m long. Brachiolium with 1 seta; R with 0–4, 2 setae. Squama with 1–4, 2 setae.

Legs. Spur of front tibia 38–53, 42 μ m long; spurs of middle tibia 17–23, 20 μ m (9) and 15–17, 16 μ m (8) long; of hind tibia 38–45, 40 μ m (9) and 13–23, 16 μ m (9) long. Comb with 9–12, 10 (9) setae; shortest seta 13–19, 16 μ m (9) long; longest seta 26–38, 30 μ m (9) long. Lengths (micrometers) and proportions of legs:

	fe	ti	ta ₁	ta ₂	ta ₃	ta ₄	ta ₅
p ₁	387–435, 414	496–576, 528	217–274, 246	123–165, 142	90–118, 101	57–76, 65	47–57, 52
p ₂	416–482, 451	435–534, 488	161–203, 181	85–113, 101	66–85, 78	43–57, 52	43–47, 46
p ₃	435–529, 491	496–595, 557	258–312, 288	142–170, 155	123–137, 131	57–76, 65	43–57, 53

	LR	BV	SV	BR
p ₁	0.44–0.51, 0.46	3.01–3.49, 3.27	3.54–4.04, 3.85	1.8–3.3, 2.5
p ₂	0.35–0.40, 0.38	3.86–4.27, 4.07	4.90–5.59, 5.21	2.2–3.1, 2.7
p ₃	0.51–0.55, 0.53	3.19–3.42, 3.32	3.40–3.72, 3.57	3.3–4.4, 3.9

Hypopygium (Fig. 4D–E). Tergum IX with 11–20, 15 weak setae; laterosternite IX with 4–6, 5 setae. Phallapodeme 64–86, 76 μ m long; transverse sternapodeme 68–98, 87 μ m long. Virga 34–45, 40 μ m (9) long. Gonocoxite 154–180, 167 μ m long, with more or less developed inferior volsella; distance along inner margin from apex of gonocoxite to apex of inferior volsella 28–54, 45 μ m; width of volsella including knob-like projection 15–26, 21 μ m; width without projection 4–21, 13 μ m. Gonostylus 70–94, 84 μ m long; with rounded outer margin to club-shaped gonostylus; crista dorsalis well developed, low and elongate; megaseta 6–8, 7 μ m (9) long. HR 1.80–2.04, 1.94; HV 2.20–2.46, 2.36.

Mesosmittia prolixa spec. nov.

(Figs. 5 A–B)

Type locality: U.S.A., Kansas, Crawford Co., Little Walnut Creek.

Type material: Holotype, male sweeping vegetation, Little Walnut Creek, 0.5 miles west of Walnut, Crawford Co., Kansas, 3/3/82, leg P. Liechti, in coll. Mus. Zool. Univ. of Bergen (ZMBN No. 90). – Paratypes; 3 males, Douglas Creek 0.4 miles south of Stull, Douglas Co., Kansas, 4/9/81, L. Ferrington & P. Liechti; 3 males, sweep-net, Pecos River, 5 miles east of Artesia, Eddy Co., New Mexico, 11/10/74, J. E. Sublette; 1 male, at light near

Ohio River, Evansville, Indiana, 28/7/71, J. E. Sublette; 3 males, Green River, Mammoth Cave National Park, Edmonson Co., Kentucky, 13/8/81, P. L. Hudson; 1 male, spring on Rt. 441, 12 miles southeast of Gatlinburg, Sevier Co., Tennessee, 6/5/78, P. L. Hudson; 1 male, small stream, Univ. of Georgia Campus, Athens, Clarke Co., Georgia, 24/8/78, P. L. Hudson (BMNH, CNC, USNM, ZSM, JES).

Diagnostic characters: See key on p. 40.

Etymology: From Latin *prolixus*, long, extended, drawn out, referring to the apical elongation of the male gonocoxite.

Description

Male imago (n = 10–13, except when otherwise stated)

Total length 1.79–2.49, 2.16 mm. Wing length 0.96–1.29, 1.12 mm. Total length/wing length 1.88–2.05, 1.91. Wing length/length of profemur 2.54–2.87, 2.74. Coloration brown with elongation of gonocoxite, gonostylus, all tarsi, and apical half except apex of middle and hind legs whitish.

Head. AR 1.17–1.40, 1.25. Ultimate flagellomere 338–413, 381 μ m long. Temporal setae 7–9, 8; including 4–5, 4 inner verticals; and 3–5, 4 outer verticals. Clypeus with 7–11, 9 setae. Cibarial pump, tentorium, and stipes as in Fig. 5A. Tentorium 105–135, 110 μ m long; 17–21, 20 μ m wide at sieve pore. Stipes 98–131, 112 μ m long; 30–49, 37 μ m wide. Palp lengths (micrometers): 23–30, 26; 38–53, 45; 58–84, 71; 60–84, 74; 94–116, 111.

Thorax. Anteprenotum with 0–3, 1 (9) setae. Dorsocentrals 5–10, 7; acrostichals 8–14, 11; prealars 3–7, 5. Scutellum with 5–6, 6 setae.

Wing. VR 1.27–1.41, 1.35. C extension 23–41, 31 μ m long. Brachiolum with 1 seta; R with 0–2, 1 setae. Squama with 3–5, 4 setae.

Legs. Spur of front tibia 38–45, 42 μ m (9) long; spurs of middle tibia 19–26, 22 μ m and 15–23, 19 μ m long; of hind tibia 38–49, 39 μ m and 15–21, 18 μ m long. Width at apex of front tibia 23–32, 30 μ m (9); of middle tibia 24–32, 28 μ m; of hind tibia 30–41, 37 μ m. Comb of 10–11, 11 setae; shortest setae 15–23, 19 μ m long; longest seta 30–41, 34 μ m long. Lengths (micrometers) and proportions of legs (n = 8 for ta₁–ta₅ and ratios of front leg):

	fe	ti	ta ₁	ta ₂	ta ₃	ta ₄	ta ₅
p ₁	335–463,395	435–595,511	227–293,271	142–189,159	104–132,116	66–85,73	47–66,53
p ₂	350–520,436	387–543,470	165–217,195	88–123,104	61– 95, 78	43–57,51	38–52,46
p ₃	373–548,465	444–643,545	255–350,309	123–189,162	104–151,133	52–80,67	43–66,53
	LR	BV	SV	BR			
p ₁	0.49–0.57,0.53	2.74–3.14,2.91	3.11–3.61,3.38	2.0–3.2,2.6			
p ₂	0.40–0.45,0.42	3.58–4.28,3.95	4.26–4.90,4.61	2.4–2.8,3.5			
p ₃	0.54–0.61,0.57	3.03–3.33,3.17	3.03–3.45,3.24	4.0–4.7,4.2			

Hypopygium (Fig. 5B). Tergum IX with 16–26, 22 weak setae; laterosternite IX with 6–7, 7 setae. Phallapodeme 56–75, 68 μ m long; transverse sternapodeme 71–90, 80 μ m long. Virga 38–56, 49 μ m long. Gonocoxite 158–214, 192 μ m long; with a 26–60, 49 μ m long apical rounded projection carrying 11–25, 18 setae; length of gonocoxite including projection 173–251, 222 μ m; inferior volsella low with only low rounded projection distinct. Gonostylus 86–113, 101 μ m long; evenly rounded on outer margin, straight on inner margin, with well developed crista dorsalis; megaseta 4.5–8, 7 μ m long. HR, excluding projection 1.80–2.08, 1.91; including projection 2.00–2.42, 2.20; HV 1.94–2.49, 2.23.

Mesosmittia tora spec. nov.
(Figs. 5C-E)

Mesosmittia flexuella, SAETHER 1973: 59, not EDWARDS, 1929

Type locality: U.S.A., South Dakota, Missouri River southeast of Gayville.

Type material: Holotype, male, Missouri River 2 miles east 6 miles south of Gayville, South Dakota, 29/5/72, leg. P. L. Hudson, in coll. Mus. Zool. Univ. of Bergen (ZMBN No. 91). – Paratypes; 9 males, as holotype; 1 male, as holotype except 6/8/72; 1 male, Missouri River, Clay County Park, Vermillion, South Dakota, 14/7/71, P. L. Hudson (BMNH, CNC, USNM, ZSM, JES).

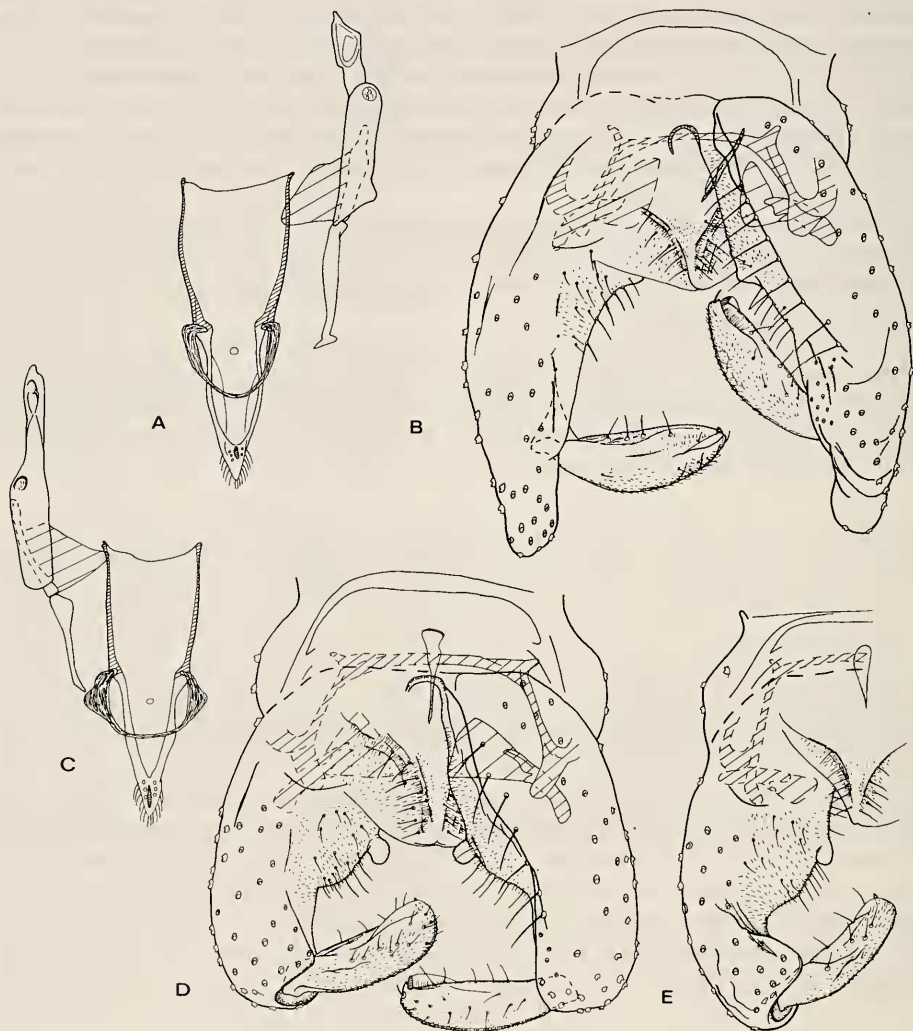


Fig. 5. *Mesosmittia* spp., male imagines: A-B. *Mesosmittia prolixa* spec. nov. (A. Cibarial pump, tentorium and stipes; B. Hypopygium). C-E. *Mesosmittia tora* spec. nov. (C. Cibarial pump, tentorium and stipes; D-E. Hypopygium with variation).

Diagnostic characters: See key on p. 40.

Etymology: From Latin *torus*, a bulge, swelling, knot, referring to the preapical rounded projection of the male gonocoxite.

Description

Male imago (n = 10, except when otherwise stated)

Total length 1.99–2.47, 2.19 mm. Wing length 1.11–1.31, 1.18 mm. Total length/wing length 1.72–1.98, 1.85. Wing length/length of profemur 2.54–2.70, 2.65 (8). Coloration brown with whitish tarsi of all legs, tibia of middle leg whitish except basal $\frac{1}{4}$ and apical $\frac{1}{6}$, tibia of hind leg whitish except basal $\frac{1}{3}$ and apical $\frac{1}{7}$.

Head. AR 1.11–1.29, 1.20. Ultimate flagellomere 368–430, 400 μ m long. Temporal setae 6–10, 8; including 3–5, 4 each of inner and outer verticals. Clypeus with 6–12, 9 setae. Cibarial pump, tentorium and stipes as in Fig. 5 A. Tentorium 113–135, 124 μ m long; 19–26, 21 μ m wide at sieve pore. Stipes 101–120, 113 μ m long; 34–53, 41 μ m wide. Palp lengths (micrometers): 26–34, 28; 41–53, 47; 64–83, 75; 60–83, 74; 86–105, 91 (6).

Thorax. Antepnotum with 0–1, 1 lateral seta. Dorsocentrals 5–13, 9; acrostichals 10–16, 12; prealars 4–7, 5. Scutellum with 6–8, 7 setae.

Wing. VR 1.23–1.46, 1.32. C extension 8–30, 17 μ m long. Brachiolum with 1 seta; R with 0–5, 1 setae. Squama with 2–4, 3 setae.

Legs. Spur of front tibia 41 μ m (2) long; spurs of middle tibia 19–23, 22 μ m (5) and 15–17, 16 μ m (3) long; of hind tibia 34–45, 38 μ m (5) and 15–19, 16 μ m (4) long. Width at apex of front tibia 24–32, 28 μ m (7); of middle tibia 24–34, 29 μ m (8); of hind tibia 36–45, 40 μ m. Comb with 9–13, 12 (8) setae; shortest seta 15–23, 19 μ m (6) long; longest seta 30–38, 33 μ m (6) long. Lengths (micrometers) and proportions of legs:

	fe	ti	ta ₁	ta ₂	ta ₃	ta ₄	ta ₅
p ₁	406–501,449(9)	524–643,557(8)	246–274,256(4)	142–170,155(4)	104–113,107(3)	66–76,71(3)	43–57,51(3)
p ₂	406–510,463	435–581,496	180–198,192(6)	95–123,106(6)	61–85, 77(6)	38–57,47(5)	38–47,44(5)
p ₃	463–567,520	539–662,583	293–539,314(4)	151–189,165(4)	123–161,137(4)	59–80,69(4)	47–66,56(4)
	LR	BV	SV	BR			
p ₁	0.46–0.49,0.47(4)	3.23–3.28,3.26(3)	3.79–3.91,3.82(4)	2.0–2.5,2.2(4)			
p ₂	0.38–0.43,0.40(6)	3.85–4.45,4.14(5)	4.45–5.10,4.90(6)	2.0–3.3,2.7(6)			
p ₃	0.52–0.55,0.54(4)	3.15–3.56,3.35(3)	3.37–3.63,3.48(3)	3.0–4.2,3.5(4)			

Hypopygium (Fig. 5 D–E). Tergum IX with 20–25, 21 weak setae; laterosternite IX with 7–10, 9 setae. Phallapodeme 83–107, 91 μ m long; transverse sternapodeme 79–109, 95 μ m long. Virga 49–60, 54 μ m long. Gonocoxite 184–233, 202 μ m long with well developed inferior volsella; distance along inner margin from apex of gonocoxite to apex of inferior volsella 60–86, 71 μ m; width of inferior volsella including knob-like projection 23–34, 28 μ m; width without projection 15–24, 19 μ m. Gonostylus 84–109, 94 μ m long; with slightly rounded outer and nearly straight inner margin; crista dorsalis well developed, but low; megaseta 6–8, 7 μ m long. HR 2.12–2.20, 2.17; HV 2.26–2.44, 2.33.

Mesosmittia truncata spec. nov.

Figs. 6 A–D

Type locality: Panama Canal Zone, Colon.

Type material: Holotype, male, canopy fogging, humid forest, tree 1, Colon, Panama Canal Zone, 2–14/7/79, leg. E. Broadhead et. al., BM 1979–125, in coll. B. M. N. H.

Diagnostic characters: See key on p. 40.

Etymology: From Latin *truncatus*, cut off, maimed, referring to the relatively short last antennal segment and the low antennal ratio.

Description

Male imago (n = 1)

Total length 1.94 mm. Wing length 0.93 mm. Total length/wing length 2.06. Wing length/length of profemur 2.53. Coloration brown with tibia, tarsi and gonostylus somewhat paler.

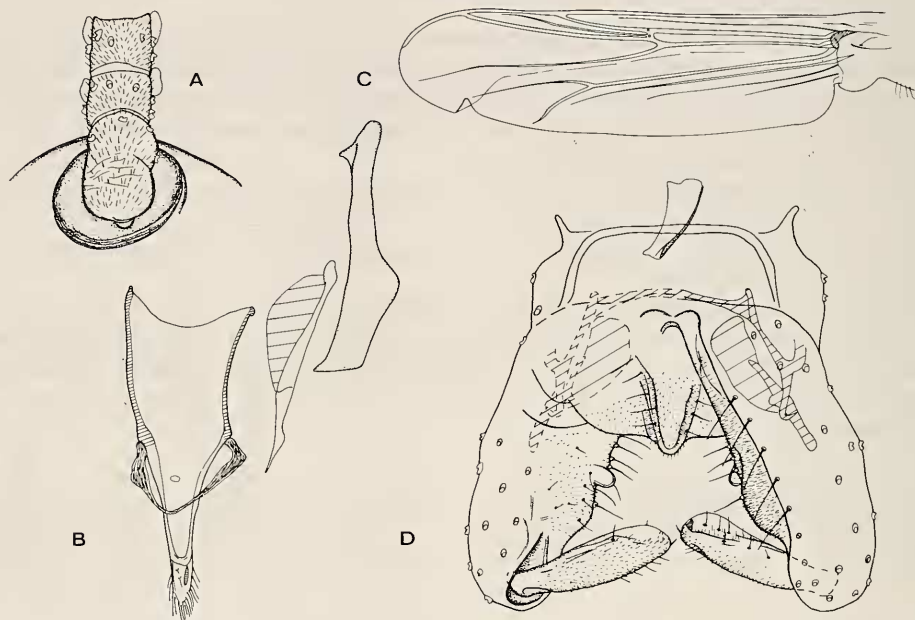


Fig. 6. *Mesosmittia truncata* spec. nov., male imago: A. Basal antennal segments; B. Cibarial pump, tentorium and stipes; C. Wing; D. Hypopygium.

Head. AR 0.82. Ultimate flagellomere 281 μ m long. Temporal setae 5, including 2 inner and 3 outer verticals. Clypeus with 5 setae. Cibarial pump, tentorium and stipes as in Fig. 6 B. Tentorium 120 μ m long, 21 μ m wide at sieve pore. Stipes 98 μ m long, 23 μ m wide. Palp lengths (micrometers): 23, 41, 49, 56, and lost.

Thorax. Antepronotum without lateral setae. Dorsocentrals 5, acrostichals 9, prealars 4. Scutellum with 6 setae.

Wing (Fig. 6 C). VR 1.43. C extension 116 μ m. Brachiolum with 1 seta, other veins bare. Squama with 4 setae.

Legs. Spur of front tibia 45 μ m long, spurs of middle tibia 26 μ m and 21 μ m long, of hind tibia 38 μ m and 23 μ m long. Comb with 10 setae, 19–30 μ m long. Lengths (micrometers) and proportions of legs:

	fe	ti	ta ₁	ta ₂	ta ₃	ta ₄	ta ₅	LR	BV	SV	BR
p ₁	369	406	—	—	—	—	—	—	—	—	—
p ₂	378	387	—	—	—	—	—	—	—	—	—
p ₃	402	435	265	180	113	52	43	0.61	2.84	3.16	4.4

Hypopygium (Fig. 6D). Tergum IX with 10 weak setae, laterosternite with 4 setae. Phallapodeme 58 μm long, transverse sternapodeme 64 μm long. Virga 41 μm long. Gonocoxite 131 μm long, distance along inner margin from apex of gonocoxite to apex of inferior volsella 34 μm , width of volsella including knob-like projection 19 μm , width without projection 15 μm . Gonostylus 68 μm long; crista dorsalis well developed, low and elongate. HR 1.94, HV 2.86.

Remarks. This Neotropical species differs from all the other known species of the genus in the low antennal ratio, the high venarum ratio, the long extension of the costa and the leg ratios (at least of the hind leg). The hypopygium, however, is practically inseparable from that of *M. patrihortae* which appears to be the closest related species.

Acknowledgements

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